

IN THE CLAIMS

Please amend the claims as follows:

Claims 1-17 (Canceled).

Claim 18 (New): A method of damping oscillating modes of an infinitely variable transmission with electric variator, including a heat engine and at least two electric machines, wherein a torque instruction of the electric machines is a sum of a main instruction making it possible to attain setpoints for wheel torque and torque of the heat engine, and of an instruction supplement intended to damp the oscillating modes brought about by stiffnesses of a kinematic chain between the heat engine and the wheels.

Claim 19 (New): The method of damping as claimed in claim 18, wherein the instruction supplement depends on setpoints and on estimates of physical quantities.

Claim 20 (New): The method of damping as claimed in claim 18, wherein the instruction supplement is composed of a first element which is a linear combination of the setpoints, and of a second element which is a linear combination of physical quantities.

Claim 21 (New): The method of damping as claimed in claim 20, wherein the second element integrates an estimate of a status of the heat engine.

Claim 22 (New): The method of damping as claimed in claim 20, wherein the second element integrates an estimate of a speed of the wheels.

Claim 23 (New): The method of damping as claimed in claim 20, wherein the second element integrates an estimate of a status of the electric machines.

Claim 24 (New): The method of damping as claimed in claim 20, wherein the second element integrates an estimate of engine torque exchanged between the engine and a box.

Claim 25 (New): The method of damping as claimed in claim 20, wherein the second element integrates an estimate of torque at the wheels.

Claim 26 (New): The method of damping as claimed in claim 20, wherein the second element integrates an estimate of frictional torque of the heat engine.

Claim 27 (New): The method of damping as claimed in claim 20, wherein the second element integrates an estimate of frictional torque at the wheel.

Claim 28 (New): A device for supervising a transmission ensuring regulation of torque at wheels and of thermal status of an infinitely variable transmission with electric variator, comprising:

a heat engine;
at least two electric machines; and
a unit for damping torsional modes, which calculates an instruction supplement intended to damp oscillating modes brought about by stiffnesses of a kinematic chain between the heat engine and the wheels.

Claim 29 (New): The supervising device as claimed in claim 28, wherein the damping unit provides the instruction supplement added to an instruction setpoint of the electric machines established by a unit for mechanical decoupling between the heat engine and the electric machines.

Claim 30 (New): The supervising device as claimed in claim 29, wherein the mechanical decoupling unit receives two instructions calculated in a unit for mechanical regulation based on setpoints and estimates of a status of the heat engine and of the torque at the wheels.

Claim 31 (New): The supervising device as claimed in claim 29, further comprising a mechanical determination unit affording estimation of an engine status, and of the torque at the wheels.

Claim 32 (New): The supervising device as claimed in claim 29, wherein the mechanical determination unit establishes an estimation vector for the oscillating modes, which is intended for calculation of the instruction supplement.

Claim 33 (New): The supervising device as claimed in claim 32, wherein the estimation vector for the oscillating modes is transmitted to the mechanical decoupling unit and to the damping unit for the torsional modes.

Claim 34 (New): The supervising device as claimed in claim 31, wherein the mechanical determination unit, the mechanical regulating unit, the mechanical decoupling

unit, and the damping unit for the torsional modes, are grouped together in a mechanical supervising unit affording regulation of the torque at the wheels and status of the heat engine.